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ABSTRACT

Several recent reports on the untutored second language acquisition of English have suggested that the same developmental sequence holds for the acquisition of the interrogative structures irrespective of whether English is acquired as a first language (L1) or a second language (L2). These studies have been conducted within the Klima & Bellugi (1966) framework worked out for the L1 acquistion of English. New data from four children with German as L1 and acquiring English as L2 naturalistically, i.e., without being tutored, indicate that these results do not hold for every combination in which English is acquired as L2. Furthermore, if the data from the earlier reports are re-analyzed within a more detailed framework than the Klima & Bellugi one, then differences comparable to those found for L2 English/L1 German become apparent. It is concluded that: (1) the L1 acquisition of English questions is different from the L2 acquisition; and (2) the L2 developmental sequences for any language vary systematically as a function of the L1 acquired previously. (Author/CFM)

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THE L1 VS. L2 ACQUISITION OF ENGLISH INTERROGATION+

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Abstract

Several recent reports on the untutored L2 acquisition of English have suggested that the same developmental sequence holds for the acquisition of the interrogative structures irrespective of whether English is acquired as L1 or L2. These studies have been conducted within the Klima & Bellugi (1966) framework worked out for the L1 acquisition of English. New data from four children with German as L1 and acquiring English as L2 naturalistically, i.e. without being tutored, indicate that these results do not hold for every combination in which English is acquired as L2. Furthermore, if the data from the earlier reports are re-analyzed within a more detailed framework than the Klima & Bellugi one, then differences comparable to those found for L2 English/L1 German become apparent. It will be concluded that (a) the L1 acquisition of English questions is different from the L2 acquisition, and that (b) the L2 developmental sequences for any language vary systematically as a function of the L1 acquired previously.

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THE L1 VS. L2 ACQUSITION OF ENGLISH INTERROGATION

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0. Purpose

Much of the recent research on naturalistic, i.e. untutored, L2 acquisition has sought to determine whether L1 acquisition is like L2 acquisition. For some structural areas there is now reliable evidence that the respective developmental sequences are not necessarily the same (for phonology cf. Wode 1975, 1977a; for inflections and grammatical morphemes cf. , for instance, Dulay & Burt 1973, 1974a-b; Hakuta 1974; Perkins & Larsen-Freeman 1975; Krashen et al. 1976; Wode 1976a; Wode et al. 1977; for negation cf., for example, Ravem 1968; Schumann 1975; Wode 1977b). As for interrogation, Ravem (1968, 1970) has reported some L2 utterances that have so far not been found for L1 English. Huang (1971) , however, in a very detailed study of a 5 year-old Taiwanese found this boy's L2 developmental sequence to parallel the one for L1 English. Huang's L1 data came from Klima & Bellugi (1966) and Hatch (1969). In a detailed reanalysis of Huang (1971), Felix (1978) has suggested that there may be some L2 peculiarities not covered by the Klima & Bellugi/ Huang approach. Felix (1978) has further pointed out some differences between L1 vs. L2 German.

This paper summarizes new data on the untutored L2 acquisition of English interrogation by my four children, Heiko born in 1966, Birgit born in 1967, Lars born in 1969, and Inga born in 1971. They were first observed how they acquired German as their L1. At ages 3;11 - 8;11, they were taken to Trinity Center, California, for half a year to be studied as to how they would acquire English without school room tuition. My data include a) tape recordings of spontaneous speech, b) handwritten notes of spontaneous utterances and taken immediately on the scene of action, and c) tape recordings of experimental sessions. The data types (a-b) will be kept strictly separate from type (c), because the evidence is not isomorphic. We have found that the children do not necessarily produce the same utterances in response to experimental elicitation as they do in their spontaneous chatter. I shall draw primarily on the spontaneous data.[1]

This study is part of a larger endeavour that seeks to establish the commonalities and differences between the various acquisitional types, such as L1, untutored L2, tutored L2, pathological acquisition, etc. The project has been described in more detail in Wode (1974, 1976a). This paper focusses on the developmental sequence of the interrogative system as observed with these four children. My particular interest here are differences between L1 vs. L2 English.

It will first be necessary to review the Klima & Bellugi approach and to suggest some extensions (Sec. 1-2). Next will be a summary of those highlights of the L1 acquisition of questions that differ markedly from the L2 acquisition (Sec. 3). Sec. 4 describes our children's L2 acquisition in some detail. The final Sec. 5-6 present an attempt to integrate the evidence from other studies on L2 acquisition and to point out the major differences and parallels.

1. The Klima & Bellugi Framework

In our experience the Klima & Bellugi approach involves several shortcomings: (a) The developmental stages are not detailed enough; (b) the developmental sequence is too rigid; (c) the approach cannot be generalized to the acquisition of other languages which contain interrogative devices not used in English, like, for instance, the use of such markers as Finnish -ko∼-kö, Bulgarian -li, etc.

To illustrate the need for a more detailed break-down of the developmental sequence I shall review Klima & Bellugi's period 1. It subsumes several distinct structural types.

Period 1:

yes/no questions (marked solely by intonation without inversion, no do-support)

(1) Fraser water?
(2) see hole?
(3) ball go?
(4) no ear?

wh-questions (no inversion, no do-support)

(5) who that?
(6) why?
(7) what that?
(8) what cowboy doing?
(9) where Mama boot?
(10) where milk go?

structural description

(a) S $Q^{yes/no}$ - Nucleus
(b) S Q^{what} - NP (doing)
(c) S Q^{where} - NP (go)

Rules (a-c) are too general. To give just one illustration, these rules seem to imply that at this stage of their development the only device available to children to form information

questions is to prepose a wh-pronoun. This clashes with the available evidence. Before the whole range of interrogative pronouns is acquired, children may use intonation questions which are superficially like those of Klima & Bellugi's period 1 to signal information questions, i.e. ask for 'where, what, why,' and the like. In fact, such intonationally marked information questions may, in general, precede the proper use of wh-pronouns (Cf. Wode 1976b, for details including data from German, Latvian (Ruke-Dravina 1963), Bulgarian (Gheorgov 1908), Swedish (Lange & Larssen 1973), Finnish (Bowerman 1973) as well as English). Thus a child's utterance like Klima & Bellugi's (3) ball go? could very well be intended as 'where did the ball go?'.

Approaches like Klima & Bellugi's are not flexible enough (point (b)) in at least two ways: They allow neither for overlap between stages of development nor for child-individual variations within developmental sequences. When children move, or have moved, from one stage to the next, they do not suddenly stop to produce utterances of the type characteristic of the former stage. Depending on the situation/task a child is confronted with he will use structures he may be thought to have outgrown.

For L1 acquisition the phenomenon can be documented from the day-by-day diary observations, like, for instance, Gheorgov (1908), Scupin & Scupin (1907), Ruke-Dravina (1963), Smith (1973) - to name just a few. In our L2 data the amount of overlap is still greater. On the one hand, our children's L2 acquisition of English might be summarized in terms of rigid developmental sequences implied, for instance, by the Klima & Bellugi approach, with the stages - for my data - ordered as described in Sec. 4 (cf., in particular, Tab. 6 below). Such analyses do give a fair view of the major stages of development. But they do not display the nature of the overlap.

With our L2 children this overlap did not decrease steadily, say, during the transition from one stage to the next. It was structured in that it varied with the situation/task the child was faced with. The most extreme cases occurred in the elicitation experiments (translation tests, Berko (1958) type tests, and others). In these experiments the children often used, amongst other things, L2 structures they had outgrown in their spontaneous development, by at least two or three stages. Some such overlap also occurred in their spontaneous productions. The fact that this kind of overlap correlates with specific situations implies that it is not simply free variation. We have yet to determine the crucial factors that lead to this type of overlap.

Another type of overlap to be mentioned here concerns premature stereotypes. L1 as well as L2 children are liable to use fairly complex utterances from very early on. They are acquired/ imitated as wholes but they do not mirror adequately the child's knowledge of the grammar of the language he is acquiring. As the child progresses such early stereotypes tend to be simplified to fit the child's growing linguistic competence. Children may differ drastically as to the extent to which they rely on such stereotypes. For instance, Fillmore's (1976) and Huang's (1971) subjects seem to have relied much more on such stereotypes than any of my four children. And even among mine the oldest used far less stereotypes than the other three.

The use of stereotypes is not the only way in which children may vary in their individual development both for L1 (see, for instance, Wode 1976b, 1977c) and for L2. In general, we have found that some stages and utterance types occur with all children, others do not. Some such variable utterance types are used very frequently, others may be extremely infrequent. Two points are important here: This kind of individual variation occurs at specific points in the respective developmental sequences; and the range of variability seems to be restricted to a limited set of alternatives.

2. An Alternative Approach

We have so far not been able to develop fully satisfactory solutions to all the problems raised in Sec. 1. Point (c), i.e. generalisability to interrogative devices not used in English, is provided for by reference to a typology of interrogative systems. It has proved useful to distinguish clearly between the semantic intention and the formal devices involved in children's utterances.

functional:

(a) yes/no questions (JNQ): they require <u>yes</u>, <u>no</u>, or some equivalent as an answer

(b) information questions (inform-Q): the answers sought refer to time, place, cause, etc.

formal devices

(c) intonation questions (inton-Q): they are distinguished from non-questions solely through the intonation

(d) pronominal questions (pron-Q): the interrogative marker is a free morpheme, i.e. the interrogative pronoun

(e) particle-questions (particle-Q): the interrogative constituent is marked by a bound morpheme, i.e. the interrogative particle, such as, for instance, Bulgarian -li, Finnish -ko∼-kö

(f) inversion or word order questions (word order-Q): they differ from non-questions by word order permutation

These formal devices may combine in various ways in different languages. For instance, in German, inversion occurs in JNQ as well as in inform-Q, and these permutations affect both Aux and full verbs in the same way. In English, inversion proper occurs only in questions involving a copula or Aux; full verbs require do-support. The developmental sequences for a given language can be predicted as a function of the way in which these semantic and formal properties, along with others, combine to form the interrogation system of that language (for details cf. Wode 1976b).

As for point (b), there is, to my knowledge, no satisfactory, perhaps quantifiable, criterion to establish onset of productivity vs. stereotyped usage, range of variation, and the like. Consequently, our policy so far has been not to impose any ad hoc criterion in terms of frequency of occurrence, say 2 times, 5 times, or 10 times. This procedure would have the advantage of making the remaining data look neater and - deceptively - more coherent. At the same time, however, it would eliminate those data that illustrate the less central types of child-individual variation. Moreover, 5 examples from a talkative child may have far less significance than 2 from one who does not talk much (to the investigator). Conversion of frequency of occurrence to %, perhaps as in morpheme order approaches, is equally unsatisfactory. In fact, recent studies by Rosansky (1976) and Andersen (1977) have shown that those bits of data discarded or levelled out by approaches tied to ad hoc frequency criteria may be more enlightening than the data admitted for analysis by the same criteria. In sum, then, the difficulty is not not to impose a criterion but in finding one that is well motivated acquisitionally, i.e. not ad hoc and that does not eliminate crucial data.

In our approach, we summarize all structural types that are not obvious slips of the tongue into a chronological sequence. By carefully considering frequency of occurrence, error types, morphological diversity of a given structure, and the like, we attempt to locate the point of (most likely) first non-imitative use. A detailed description of the data would contain a number of occurrences over time for each structural element, a discussion of what might indicate non-imitative usage, etc. However, to include all these details in this paper would require too much space. Therefore, detailed frequency tables are converted to brief approximations like very frequent,

rare, very rare, and the like. The extent of overlap and details of what may indicate first non-imitative use are not given at length. Nonetheless, even this condensed version, I think, serves well enough to establish the main point of this paper, namely, that the L1 and L2 acquisition of English interrogation are different in many ways.

3. Some Major Aspects of L1 Acquistion

3.1 Developmental Sequence for Basic Question Types

The major variables governing the developmental sequence for the basic question types is not so much the semantics, such as JNQ vs. inform-Q, but the formal properties such as inton-Q, pron-Q, etc. The basic developmental sequence is: inton-Q precedes pron-Q which, in turn, precedes particle-Q and/or word order-Q, provided the language to be acquired has these types. If a language lacks a certain type, as, for instance, Finnish lacks inton-Q (Bowerman 1973), then the children will not invent this type, but they will advance to the next one.

Within this approach the first L1 questions are holophrastic, that is they contain but one word. Consequently, in both English and German, the first questions are holophrastic inton-Q. Semantically the first inton-Q are JNQ (11). Later on they may also be inform-Q (12).

(11) kaputt? 'broken?'
(12) Henning, du gewesen? 'Henning, where have you been?'

The first pron-Q may already occur during the holophrastic stage. In general, these tend to be locative questions, hence German wo, 'where', English where.

3.2 Inversion, do-support, Positioning of wh-Pronouns

The details of the subsequent development of both JNQ and inform-Q vary as a function of the structure of the target language. That is whether, for example, the situation is as in German where all verbs, irrespective of whether Aux or full verbs, invert in much the same way, or whether as in English Aux are treated differently from full verbs with the latter requiring do-support. According to Klima & Bellugi in L1 English, inversion and do-support appear first in JNQ. At the same time pron-Q still have the word order SV(O). Thus during their period 3 Klima & Bellugi found examples like (13-16).

(13) will you help me?
(14) is Mami talking to Robin's grandmother?
(15) Oh, did I caught it?
(16) where small trailer he should pull?

The wh-pronouns are for a long time only placed sentence-initially (Brown 1968).

3.3 Semantic Pecularities of wh-Pronouns

The L1 children's deviations from target usage seem to be governed by specific regularities which are exemplified by some examples from German because of the lack of data from English.

Fig. 1 L1 overgeneralizations of interrogative pronouns for German wo and was (Wode 1976b; Greenhalgh 1976)

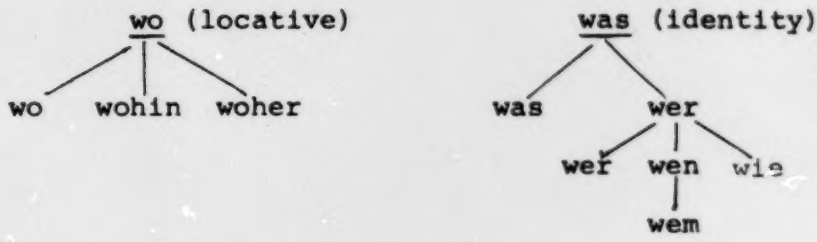

Fig. 1 indicates that in the beginning L1 children tend to use wo for 'where' and later also for 'where to' and 'where from' as long as they have not yet acquired wohin and woher. The graph further illustrates that one will not find, say, wo used with the intention of 'wer, warum, wann (who, why, when)'. It seems that the L1 child's usage of the interrogative pronouns is governed by regularities that follow the branching of Fig. 1. The item at the dominating node may be used for subordinated items, but not the subordinated for the dominating one. Fig. 1 further suggests that the L1 child will overgeneralize the use of interrogative pronouns in close accord with the semantic-syntactic regularities of the wh-pronouns of the target L1.

3.4 Developmental Sequence for the Interrogative Pronouns

The developmental sequence for the wh-pronouns cannot be summarized such that, say, what invariably precedes who, because they tend not to be acquired in all syntactical environments at the same time. For instance, in our German data was antedates wer in copula questions, but the reverse holds for full verb questions

with wer antedating was. (Similar data are reported, for instance, in Gheorgov 1908, Scupin & Scupin 1907, Ruke-Dravina 1963.) Nevertheless, as an approximation I have disregarded such subtleties and summarized the overall development in Tab.1.

Tab. 1 Three early stages in the L1 developmental sequence for the interrogative pronouns (adapted from Wode 1976b)

		German	English
I	locative	wo	where
II	identity		
	1. impersonal	was	what
	2. personal	wer	who
III	modalitiy	wie	how

4. Untutored L2 Acquisition

4.1 Holophrastic Questions

There does not seem to be a holophrastic stage proper as recorded for L1. This accords with insights into other areas of syntax (Felix 1978). Futhermore, to my knowledge, no L2 cases have been reported where a child used an inton-Q with the intention of an inform-Q.

4.2 Semantic Peculiarities of wh-Pronouns

L2 children may also use wh-pronouns in ways deviating from the target. However, these deviations seem to differ from the L1 regularities, as Felix (1978) first pointed out for L2 German/ L1 English. My data on L2 English/L1 German confirm Felix' findings. Contrast Fig. 1 for L1 with Tab. 2 for L2.

Tab. 2 L2 usage of wh-pronouns

L2 German/L1 English	wo	for:	'wann, warum, wie, wo'
	warum	for:	'wo, wann, warum'
	wer	for:	'wo, wer'
L2 English/L1 German	who	for:	'who, how'

Such non-targetlike L2 usages have so far not been found frequently, and they do not necessarily seem to be the same for every L2 child. However, it is obvious that these deviations

do not follow the regularities of Fig. 1. That is L2 children do not overgeneralize in the same way as L1 children. What governs these L2 usages is not clear yet. An explanation will have to include morphonological aspects as well, as seems to be suggested by German wer for English 'where'. But why should German children use wo [hu] for English 'how'?

4.3 Developmental Sequence for the wh-Pronouns

The L2 developmental sequence for the wh-pronouns is not the same as has been found for L1. Contrast Tab. 3 for L2 English/ L1 German with Fig. 1 for L1. Nor does the sequencing seem to be the same across the four children. The reasons are not clear at the present state of our knowledge.

Tab. 3 L2 developmental sequence for the interrogative pronouns (all four children). () indicates occurrence with and without bracketed item. The figures refer to months and days of exposure to English (1;26 = 1 month and 26 days of exposure)

Heiko		Birgit		Lars		Inga	
what	0;28	what	1;25	how	0;15	what	2;11
who	0;29	where	2;2	what	1;10	when	2;23
where	1;26	how many (N)	2;5	where	1;18	who	3;24
how many	1;30	how much N	2;19	who	2;25	why	4;9
when	2;1	what time	3;1	why	2;25	how	5;23
what time	2;4	how much (N)	3;2	when	2;25		
whose (N)	2;4	who	3;10	whose N	2;25		
how many (N)	2;9	why	3;13	what (N)	2;25		
how (Adj)	2;11	what (N)	3;15	whose	3;0		
what (N)	2;13	whose N	3;16	how many	4;0		
how much	3;3	how (Adj)	3;16	how much	4;6		
how much (N)	3;9	whose (N)	3;16	how much (N)	4;18		
how	3;9	which N	3;16	how (Adj)	4;21		
which N	5;4						

4.4 Developmental Sequence for the Interrogative Syntax

The details are very complex. There are many false starts and many seemingly unproductive structural subtypes. It is best, therefore, to first deal with JNQ and inform-Q separately, and then summarize the major structural types into an overall developmental sequence.

4.41 The Development of JNQ

The major stages are summarized in Tab. 4., on the following page.

Stage I: Non-inverted inton-Q.

The first JNQ are inton-Q proper, that is without inversion or do-support. There may be one-word questions like right?, chocolate?; elliptical questions like ready, Tiff?, want some, Tiff?; or whole sentences. The subtypes (Ia-c) do not appear invariably in the same order. With Heiko the type Ic precedes Ib, with the other children Ib precedes Ic.

Stage II: Inversion in copula questions and in questions containing can.

The first inverted JNQ are copula questions and/or questions involving can. There may be morphonological peculiarities like it's used for 'is', I'm used for 'I'. That these items are at first monomorphemic for the children can be inferred from their occurrence in other contexts.

The structural types IIa-b may co-occur or they may be ordered such that questions involving be precede those involving can. Questions with full verbs are at first not inverted for quite a while as in (17). Just as in L1 acquisition the word order is SV(O).

(17 a) you catch a salmon there in the Trinity River?
'did you catch a salmon there in the Trinity River?'

b) hey, John, you wants to sleep?
'hey, John, do you want to sleep?'

c) you locked the door and closed it, too?
'did you lock the door and did you close it, too?'

The progressive form tends to be included in these regularities if it has been acquired at this point in the children's development. If not, it will be included at the time of its acquisition.

The type IIc, i.e. inversion with full verbs, is difficult to assess. The data are not uniform. Inga does not get beyond IIb with her JNQ. With Lars IIc does not occur in the spontaneous notes at all, although he reaches stage IV. However, he does produce IIc in the experiments. Birgit's few examples of type IIc occur at the time when she begins to use IIa-b. From Heiko I have only very few such instances. All postdate the acquisition of inversion with be and can. The structural type IIc is, obviously, marginal.

Stage III: do-support with full verbs.

do-support first appears in conjunction with full verbs. The position of do, Subj and V is targetlike; do and did are used interchangeably, or one may be used for both.

Tab. 4 The major stages in the L2 developmental sequence for JNQ (all four children)

Stage	structural type		example	child	
I	non-inverted	(a) non-S	right?	Heiko	0;27
		(b) can	you can see that?	Heiko	1;28
		(c) V	you see my little football?	Heiko	1;22
II	inversion with	(a) cop	it's (=is) my fishing pole in the water?	Heiko	1;30
		(b) can	please, can I have a piece of drink? (something to ...)	Heiko	1;29
		(c) V	catch Johnny fish today?	Heiko	2;19
III	do-support with	V	Henning, did you catch anything?	Heiko	3;11
IV	do-support with	(a) cop	do it is good?	Lars	4;6
		(b) can	do the crickets can fly?	Lars	4;6
V	targetlike inversion and targetlike do-support				

Stage IV: do-support with copula and can.

After stage III there are a good many examples where do-support appears in front of be and/or can. The status of this type is difficult to assess. Only Heiko and Lars reached this stage. Spontaneous examples are fairly rare from Heiko, but there are plenty from Lars. In the experimental data there are many such examples from both boys.

Stage V: targetlike inversion and do-support.

It seems that stage IV is the last step, before inversion and do-support are handled targetlike in JNQ, apart from tense markings. Only Heiko got to this stage.

4.42 The Development of Inform-Q

The major stages are summarized in Tab. 5 , on the following page.

Stage I: wh- in copula questions.

The first inform-Q were pron-Q, i.e. wh-Q, containing a form of

Tab. 5 The major stages in the L2 developmental sequence for inform-Q (all four children)

Stages	structural type	example	child	
I	wh- cop	Henning, what is it fishing pole?	Heiko	0;29
II a)	wh- Subj Ving	what you doing, Craig?	Heiko	1;17
b)	wh- Subj V	what you want it? (how do you want the pitch?)	Heiko	2;0
c)	wh- V Subj	where have you your ball?	Heiko	2;1
d)	wh- be Subj Ving	what are you doing, airplane man?	Heiko	2;14
III a)	wh- Subj be (Ving)	how far we are going?	Heiko	2;21
	wh- Subj be X	why we are so slow?	Inga	5;8
b)	wh- Subj can	what socks I can take?	Birgit	3;15
c)	wh- can Subj	what else can I take out?	Heiko	3;8
IV	do-support with V	how do you clean them?	Heiko	3;9
V	do-support with Ving	what do we doing, Johnny?	Heiko	4;0
		what do you was doing?	Lars	4;15

the copula be. The interrogative pronouns were always placed initially. Inversion was targetlike from the very beginning.

Stage II: wh- in full verb questions without do-support.

There are four structural types that seem to belong to this stage. They are not all equally frequent. The predominant one is IIb, i.e. there is neither do-support nor Subj-V inversion. There may be a good number of examples of type IIa at the beginning of stage II. However, this type tends to grow rare or to disappear until the progressive form proper emerges.

The structural type IIc likewise was not very frequent. It is lacking with Inga in the spontaneous data. With Heiko there were frequent examples of type IIc only during the first days when he was acquiring type IIb. Afterwards IIc disappeared with him. Birgit parallels Heiko, but she continued to use type IIc sporadically during the whole time of our sojourn. However, she did not quite reach stage III, i.e. do-support. With Lars

there are a few sporadic spontaneous examples which, among other things, have a peculiar type of inversion involving progressive forms like (18).

(18 a) when it's (=is) coming Tiffany?
b) why it's (=is) not coming another bull?
'why is no other bull coming? (during a rodeo)

Type IId begins to occur after the progressive has been acquired, i.e. in contrast to type IIa, now be is no longer omitted.

Stage III: non-inverted copula and/or can.

The structural types of stage III probably have different statuses. The types IIIa-b are marginal, because such examples are extremely rare. The type IIIa occurs with Heiko, Lars, and Inga, but only after the types IIa-b, i.e. after SVO has become the dominant word order for full verb wh-Q. The type IIIb is limited to Birgit. Heiko and Lars used can frequently in wh-Q, but - in their spontaneous utterances - proper inversion of can was observed from the beginning.

Stage IV: do-support with full verbs.

do-support appears first with full verbs. In the beginning the tense markings may not be targetlike; do may be used for did and did for do/does. After type IV has supplanted the types of the earlier stages there may be some instances where do-support appears in conjunction with the progressive forms such as type V, i.e. stage V. Among the four children Inga reaches stage II, more precisely type IIa-b, as well as some examples of IIIa. Birgit likewise arrives at type IIa-d plus some examples for IIIb; in addition, she has a few isolated instances of stage IV. Lars reaches stage V. Heiko is the only one who may have moved beyond stage V to fully targetlike mastery.

4.43 The Major Stages within the Overall Development

In spite of the many different structural types the major stages are clearly discernable within the total development except for the very beginning (cf. Tab. 6). The data do not support sweeping claims to the effect that inton-Q precedes wh-Q. To be sure, there are such early items like eh?, ah? as well as the odd longer chunk spoken with a rising intonation and intended as a query. The problem is to determine whether these items can truly be considered developmental forerunners of inton-Q proper or even of inverted JNQ. I have to leave this issue unsettled here; and such items are not included in Tab. 6. Instead, I shall trace the development from the beginnings of the wh-questions, because at least from this point onwards the data are clear enough.

Tab. 6 The major developmental stages for the overall development of the interrogative syntax (all four children)

Stage	structural type	semantic type
I	wh- cop X	inform-Q
II	wh- Subj {V / Ving} (X)	inform-Q
	Subj {V / Aux / cop} (X)	JNQ
III	{cop / Aux} Subj (X)	JNQ
	wh- V Subj (X)	inform-Q
IV	wh- do Subj V (X)	inform-Q
V	do Subj V (X)	JNQ
VI	do {cop / Aux} (V ...)	JNQ
	wh- do cop (V ...)	inform-Q

Stage I: copula wh-Q,

The first wh-Q were attempts at copula wh-Q. Those involving a full verb were decidedly later. Inversion is targetlike from the beginning. The wh-pronouns are placed initially from their first occurrence.

Stage II: non-inverted JNQ and full verb wh-Q,

Full verb wh-Q are clearly later. And so are JNQ involving either the copula, Aux, or V. At first there is no do-support, and except for a few isolated examples with inverted full verbs the word order of non-interrogative sentences prevails.

Stage III: inversion in copula/Aux JNQ and full verb wh-Q.

There is only one child, Birgit, where the stages II and III are well separated in time. With the other children these two stages are fairly close together. However, there is no doubt that inversion first appears in wh-copula questions of stage I and that it is remarkably later in JNQ. With the latter type inversion first appears in copula questions and in questions

involving can. JNQ with inverted full verbs were rare, they tended to appear slightly later than the others. Also to this stage belong the wh-Q with inverted full verbs. Its productivity varies across the children.

Stage IV: do-support in full verb wh-Q.

The stages IV and V are not as well differentiated in time as some of the other stages. Moreover, the early instances of this type are not very clear as to their productivity. Nonetheless, do-support occurs with both Heiko and Lars slightly earlier in wh-Q than in JNQ. Moreover, at first it is found only in conjunction with V.

Stage V: do-support in full verb JNQ.

Stage VI: do-support with Aux and/or copula.

Stage V already looked targetlike. However, with a marked time lag following stage V there are quite a few examples where the two boys seem to depart from the targetlike usage of stage V by using do-support also in front of Aux, can, and the copula. With Heiko there are only a few spontaneous instances of this sort, but there are a good many in the experimental data. Lars, however, produces such utterances in great number, both spontaneously as well as in the experimental sessions. Moreover, it seems that during stage VI both wh-Q and JNQ begin to be treated as the same phenomenon in terms of do-support.

4.44 The Major Differences between the L1 and L2 Interrogative Syntax

Apart from the fact that in our L2 data no inton-Q are used as inform-Q, which is frequent for L1 acquisition, I think, the outstanding difference between my L2 data and the L1 data available for English, is the treatment of inversion and do-support. From Klima & Bellugi's period 3 it is obvious that there seems to be a stage for L1 English where JNQ have targetlike inversion and do-support; whereas wh-Q show no trace of either inversion or do-support. This also holds for questions involving the copula or can. Some examples from Klima & Bellugi are (19).

(19) a) does lions walk?
b) is Mommy talking to Robin's grandmother?
c) will you help me?
d) can I have a piece of paper?
e) where the other Joe will drive?
f) where my spoon goed?
g) what he can ride in?

It will be recalled that in the L2 data inversion first occurs in copula wh-Q. Furthermore, do-support is earlier in wh-Q than in JNQ. And even if there were no time lag between the two types it still would not make the L2 development parallel to the L1 development, since there should be a marked time lag between JNQ vs. wh-Q. Moreover, utterances with inverted full verbs, even if they are not very productive in L2, have not yet been reported for L1 English, at least not to my knowledge. And, lastly, some of the L2 types with do-support in conjunction with the copula and Aux have also not yet been reported for L1.

5. Evidence from Other L2 Sources

My data on L2 English/L1 German are not without parallels from other L2 combinations. To my knowledge, there are no observations on the L2 usage of wh- pronouns. However, Felix (1978) has already pointed out the general predominance of the copula sentence type(s) in Huang (1971), i.e. for L2 English/L1 Taiwanese. In addition, Huang's data clearly show that with his subject the first indications of target inversion occur in wh-Q involving reflexes of the copula. Unfortunately, Huang's subject did not acquire do-support. Whether he mastered inversion first in wh-Q, is not entirely clear in spite of Huang's painstaking effort to single out unproductive stereotypes from utterances based on the child's command of the rules of English.

Ravem's studies on L2 English/L1 Norwegian (1968, 1970) provide additional evidence. The structural types with inverted full verbs also occurred with his two subjects. It is absent in the Huang data and also in Schumann (1975, L1 Spanish).

6. Conclusions

The review of the available data, I think, indicates clearly that there may be parallels between the L1 and L2 acquisition of the interrogative structures of a given language. However, it is also clear that the degree of parallelism varies. The question is why? The answer, I think, is that the type and the degree of parallelism to be expected varies as a function of the structure of the L1 acquired previously. For instance, the L2 structural type with inverted full verb has so far been found only for L2 English/L1 German and L2 English/L1 Norwegian. This correlates with the fact that in these languages inversion applies to all verbs no matter whether V or Aux. This insight, furthermore, agrees well with what else is known about the regularities governing untutored L2 acquisition. Reliance on L1 is an integral part of L2 acquisition. Moreover, it is certainly not random. But it takes place only if specifiable prerequisites are met in terms of the child's own L2 structures. (For more detailed attempts to specify such prerequisites cf. Wode 1977a-b).

NOTES

1) The spontaneous data were collected longitudinally in a day-by-day diary type of approach. There are notes and tapes for every day from the very beginning of our stay. Throughout I have tried to avoid getting biased towards specific settings, situations, or persons among those with whom our children mixed either outdoors or indoors. The range of activities includes almost everything our children got involved in, such as ball games, fights, fishing, water-skiing, swimming, pep talks by neighbouring mothers, as well as a variety of indoor situations like meals, visitors, bed time, play sessions. These notes include the child's utterance, phonetical transcriptions, a paraphrase of the child's most likely intention, and comments on the situation. The tape recordings have proved very helpful to safeguard against unintentional selectivity during note taking.

REFERENCES

Andersen, R., 1977, The impoverished state of cross-sectional morpheme acquisition/accuracy methodology (or: The left-overs are more nourishing than the main course.) Working Papers on Bilingualism 14, 47-82.

Berko., J., 1958, The child's learning of English morphology. Word 14, 150-177.

Bowerman, M.F., 1973, Early syntactic development: A cross linguistic study with special reference to Finnish. Cambridge University Press.

Brown, R., 1968, The development of wh-questions in child speech. Journal of Verbal Learning and Verbal Behavior 7 279-290.

Dulay, H. & Burt, M.K., 1973, Should we teach children syntax? Language Learning 23, 245-258.

Dulay, H. & Burt, M.K., 1974a, Natural sequences in child second language acquisition. Language Learning 24, 37-53.

Dulay, H. & Burt, M.K., 1974b, A new perspective on the creative construction process in child second language acquisition. Language Learning 24, 253-278.

Felix, S., 1978, Linguistische Untersuchungen zum natürlichen Zweitsprachenerwerb. München, Fink (in press).

Fillmore, L., 1976, Cognitive and social strategies in second language acquisition. Ph.D. dissertation, Stanford.

Gheorgov, I.A., 1908, Ein Beitrag zur grammatischen Entwicklung der Kindersprache. Arch. ges. Psychol., 242-432.

Greenhalgh, S., 1976, Erwerb und Entwicklung der Interrogativ-pronomina in der Kindersprache am Beispiel des Deutschen. M.A. Thesis, Kiel.

Hakuta, K., 1974, A preliminary report on the development of grammatical morphemes in a Japanese girl learning English as a second language. Working Papers on Bilingualism 3, 18-43.

Hatch, E., 1969, Four experimental studies in the syntax of young children. Southwest Regional Laboratory for Education Research and Development, Inglewood, Calif.

Huang, J., 1971, A Chinese child's acquisition of English syntax. M.A. Thesis, UCLA.

Klima, E.S. & Bellugi, U., 1966, Syntactic regularities in the speech of children. In: Lyons, J. & Wales, R.J., ed., Psycholinguistics Papers, Edinburgh University Press, 183-213.

Krashen, S., Sferlazza, V., Feldman, L. & Fathman, A.K., 1976, Adult performance on the SLOPE test: More evidence for a natural sequence in adult second language acquisition. Language Learning 26, 145-151.

Lange, S. & Larsson, K., 1973, Syntactical development of a Swedish girl, Embla, between 20 and 42 months of age. Part I: Age 20-25 months. Stockholm Universitet Institutionen för Nordiska Språk.

Perkins, K. & Larsen-Freeman, D., 1975, The effect of formal language instruction on the order of morpheme acquisition. Language Learning 25, 237-244.

Ravem, R., 1968, Language acquisition in a second language environment. IRAL 4, 175-185.

Ravem, R., 1970, The development of wh-questions in first and second language learners. University of Essex Language Centre, Occasional Papers 8, 16-41.

Rosansky, E.J., 1976, Second language acquisition research. A question of methods. Ph.D. dissertation, Harvard.

Ruke-Dravina, V., 1963, Sprachentwicklung bei Kleinkindern: I. Syntax: Beitrag auf der Grundlage lettischen Sprachmaterials. Slavisk Institutionen vid Lunds Universitet, Lund.

Schumann, J.H., 1975, Second language acquisition: The pidginization hypothesis. Ph.D. dissertation, Harvard.

Scupin, E. & Scupin, G., 1907, Bubis erste Kindheit. Ein Tagebuch. Leipzig.

Smith, N.V., 1973, The Acquisition of Phonology: A Case Study. Cambridge University Press.

Wode, H., 1974, Natürliche Zweitsprachigkeit. Probleme, Aufgaben, Perspektiven. Linguistische Berichte 32, 15-36.

Wode, H., 1975, The beginnings of non-schoolroom L2 phonological acquisition: A survey of problems and issues based on data from English as L2 with German as L1. Arbeitspapiere zum Spracherwerb Nr. 8, Englisches Seminar der Universität Kiel. To appear in: IRAL.

Wode, H., 1976a, Developmental sequences in naturalistic L2 acquisition. Working Papers on Bilingualism 11, 1-31. Repr. Hatch, E., ed., Second Language Acquisition. A Book of Readings (in press).

Wode, H., 1976b, Some stages in the acquisition of questions by monolingual children. In: v. Raffler-Engel, W., ed. Child Language 1975, (Special Issue) Word 27, 261-310.

Wode, H., 1977a, The L2 acquisition of /r/. Phonetica 34, 200-217.

Wode, H., 1977b, Developmental principles in naturalistic L2 acquisition. In: Drachman, G., ed., Akten der 3. Salzburger Jahrestagung für Linguistik. Salzburg, Wiss. Verlagsbuchhandlung W. Neugebauer, 207-220.

Wode, H., 1977c, Four early stages in the development of L1 negation. Journal of Child Language 4, 87-102.

Wode, H., Bahns, J., Bedey, H. & Frank, W., 1977, Morpheme order vs. developmental sequence: The L2 acquisition of inflections. Arbeitspapiere zum Spracherwerb Nr.20, Englisches Seminar der Universität Kiel.